

KARASEVA, Ye.V.

LAVROVA, M.Ya.; KARASEVA, Ye.V.

Effect of predatory birds on the composition of the population of
the common field vole. *Biul.MOIP. Otd.biol.* 60 no.4:126-127 J1-Ag
'55. (MIRA 8:12)

(FIELD MICE) (BIRDS OF PREY)

KARASEVA, Ya.V.

Marking of terrestrial mammals in the U.S.S.R. Biul. MOIP. Otd. biol.
60 no.5:31-42 S-O '55. (MLRA 9:4)

(MAMMALS) (ANIMALS, MIGRATION OF)

KARASEVA, Ye.V.

Some developmental peculiarities of spizootic leptospirosis in *Microtus eonomus* Pall. studied by tagging [with English summary in English]. Zool. zhur. 35 no.9:1384-1389 S '56. (MLBA 9:12)

1. Institut epidemiologii i mikrobiologii imeni N.F. Gamaleya
Akademii meditsinskikh nauk SSSR.
(Yaroslavl Province--Field mice) (Leptospirosis)

LAVROVA, M.Ya.; KARASEVA, Ye.V.

Activities of birds of prey and field vole population farm lands of
southern Moscow Province [with summary in English] Biol.MOIP. Otd.
biol. 61 no.3:5-19 My-Je '56. (MIRA 9:10)
(MOSCOW PROVINCE--FIELD NICE)
(BUZZARDS)

KARASEVA, Ye. V. ; PEFELINA, L.P. ; GERMAN, A.L.

Studying natural foci of leptospirosis in Akmolinsk Province.
Biol.MOIP.Otd.biol. 61 no.6:123 N-D '56. (MIRA 10:8)
(AKMOLINSK PROVINCE--RODENTS AS CARRIERS OF DISEASE)
(LEPTOSPIROSIS)

KARASEVA, YE. V.
KARASEVA, Ye. V.

Characteristics of the burrow structure and colonies of the common vole at different seasons and in different habitats of the central part of the U.S.S.R. Mat. k pozn. fauny i flory SSSR. Otd. zool. no.37:67-75 '57. (MIRA 11:1)
(Field mice) (Animals, Habitations of)

KARASEVA, YE. V.
KARASEVA, Ye. V.; IL'YENKO, A. I.

Some features of the biology of *Microtus oeconomus* studied on tagged animals. Mat. k pozn. fauny i flory SSSR. Otd. zool. no. 37:171-184
'57. (MIRA 11:1)

(Nero region--Field mice)

KARASEVA, Ye.V.; GERMAN, A.L.; KORENBERG, E.I.

Feeding habits of the hen harrier and its influence on the
populations of the field vole *Microtus oeconomus* during an epizooty
of nonicterogenic leptospirosis [with summary in English]. Biul.
MOIP. Otd.biol. 62 no.1:11-18 Ja -F '57. (MIPA 10:6)
(ROSTOV DISTRICT--HARRIERS) (LEPTOSPIROSIS)
(FIELD MICE)

KARASEVA, Ye. V.

KARASEVA, Ye.V.; NARSKAYA, Ye.V.; BERNSHTEYN, A.D.

The field vole *Microtus oeconomus* inhabiting the region of Lake Nero
in Yaroslavl Province [with summary in English]. Biul.MOIP.Otd.biol.
62 no.3:5-18 My-Je '57. (MIRA 10:8)
(NERO REGION--FIELD MICE)

KARASEVA, E. V.

"The ecological foundation of the natural foci of leptospirosis
in the Altay Region." p. 147

Desyatoye Soveshchaniye po parazitologicheskim problemam i
prirodnootchayovym boleznyam. 22-29 Oktyabrya 1959 g. (Tenth Conference
on Parasitological Problems and Diseases with Natural Foci 22-29
October 1959), Moscow-Leningrad, 1959, Academy of Medical Sciences
USSR and Academy of Sciences USSR, No. 1 254pp.

Inst. of Epidemiology and Microbiology, AMS USSR/ Moscow

KARISEVA, E. V., KORENBERG, E. I.

"The results of the serological examination of the blood serum of rodents in Central Yakutiya." p. 148

Desyatoye Soveshchaniye po parazitologicheskim problemam i prirodnootchaynym boleznym. 27-29 Okt'yabrya 1959 g. (Tenth Conference on Parasitological Problems and Diseases with Natural Foci 27-29 October 1959), Moscow-Leningrad, 1959, Academy of Medical Sciences USSR and Academy of Sciences USSR, No. 1 254pp.

Inst. of Epidemiology and Microbiology, AMS USSR/ Moscow

ANAN'IN, V.V.; KARASEVA, Ye.V.; SEMENOVA, L.P.; CHERNUKHA, Yu.G.

Natural foci of leptospirosis in the Altai. Zhur.mikrobiol.
epid. i immun. 30 no.3:61-66 Mr '59. (MIRA 12:5)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei
AMN SSSR.

(LEPTOSPIROSIS, transm.
natural foci (Rus))

KARASEVA, Ye.V.; IL'YENKO, A.I.

Studying the biology and geographical distribution of shrews in
northern Kazakhstan. Trudy Inst. zool. AN Kazakh. SSR 13:78-92
'60. (MIRA 13:7)

1. Otdel infektsiy s prirodnoy ochagovost'yu Instituta epidemio-
logii i mikrobiologii im. N.F. Gamaleya.
(Kazakhstan--Shrews)

KARASEVA, Ye.V.

Distribution of the common vole (*Microtus arvalis* Pall.) in
different habitats and the role of the habitat in its life in
central regions of the U.S.S.R. Mat. k pozn. fauny i flory
SSSR. Otd. zool. no.38:27-55 '60. (MIRA 14:3)
(Moscow Province--Field mice)

KARASEVA, Ye.V.; KORENBERG, E.I.; MERKOVA, M.A.

Small mammals of central Yakutia and their role as natural reservoirs of some human diseases. Zool. zhur. 39 no.11:1690-1699 N '60.

(MIRA 14:1)

1. Department of Infections of Natural Nidality, Institute of Epidemiology and Microbiology, U.S.S.R. Academy of Medical Sciences, Moscow.

(Vilyuy Valley—Rodents as carriers of disease)

KARASEVA, Ye. V.

Effect produced by the plowing up of virgin land on the mode of life and distribution of murine rodents throughout the territory of northern Kazakhstan. Zool. zhur. 40 no.5:768-773 '61.

(MIRA 1455)

1. Institute of Epidemiology and Microbiology, U.S.S.R Academy of Medical Sciences, Moscow.

(Kazakhstan--Rodentia)
(Reclamation of land)

ANAN'IN, Vasil'y Vasil'yevich; KARASEVA, Yevgeniya Vasil'yevna;
ZASUKHIN, D.N., red.; BEL'CHIKOVA, Yu.S., tekhn. red.;

[Natural focus of leptospiroses] Prirodnaia ochagovost' leptospirozov. Moskva, Medgiz, 1961. 288 p. (MIRA 15:4)
(LEPTOSPIROSIS) (MEDICAL GEOGRAPHY)

KARASEVA, Ye.V.

Method of labeling used in studying the movements of hamsters
in the Altai Territory. Zool. zhur. 41 no.2:275-285 F '62.
(MIRA 15:4)

1. Institute of Epidemiology and Microbiology, U.S.S.R. Academy
of Medical Sciences, Moscow.
(Altai Territory--Hamsters)

CHERNUKHA, Yu.¹G.; SEMENOVA, L.P.; KARASEVA, Ye.V.; DUNAYEVA, T.N.

Isolation of a mixed culture of the Bataviae type of leptospira
and of the erysipelas pathogen (*Erysipelothrix rhusiopathiae*).
Zhur. mikrobiol., epid. i immun. 33 no.1:118-121 Ja '62. (MIRA 15:3)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei
AMN SSSR.

(*ERYSIPELOTHRIX RHUSIOPATHIAE*)
(*LEPTOSPIRA*)

MESSINEVA, N.A.; KARASEVA, Ye.V. (Moskva)

Laboratory differentiation of hemorrhagic states. Klin.med. 40
no.10:99-104 O '62. (MIRA 15:12)

1. Iz laboratorii klinicheskoy biokhimii (zav. N.A.Messineva)
TSentral'nogo ordena Lenina instituta gematologii i perelivaniya
krovi Ministerstva zdravookhraneniya SSSR (dir. - dotsent A.Ye.
Kiselev).

(HEMOPHILIA)

MESSINEVA, N. A.; GARIN, N. D.; KARASEVA, Ye. V.

Liver function following infusion of protein blood substitutes
(LSB and BK-8). Khirurgiia 37 no.7:130-132 J1 '61.
(MIRA 15:4)

1. Iz TSentral'nogo ordena Lenina instituta gematologii i pere-
livaniya krovi (dir. - deystvitel'nyy ohlen AMN SSSR prof. A. A.
Bagdasarov) Ministerstva zdravookhraneniya SSSR.

(BLOOD PLASMA SUBSTITUTES) (LIVER)

MESSINEVA, N.A.; KARASEVA, Ye.V.

Laboratory differentiation of hemophilia and the functional state of
the coagulation system of the blood in hemophiliacs. Lab. delo 8
no.2:7-13 F '62. (MIRA 15:2)

1. Laboratoriya klinicheskoy biokhimii (zav. N.A. Messineva)
TSentral'nogo ordena Lenina instituta gematologii i perelivaniya
krovi, Moskva.
(HEMOPHILIA) (BLOOD__COAGULATION)

KARASEVA, Ye.V.; CHERNUKHA, Yu.G.; SEMENOVA, L.P.

Study of natural foci of leptospirosis in northern Kazakhstan
and on the flatlands of the Altai Territory. Zhur. mikrobiol.,
epid. i immun. 33 no.7:13-18 JI '62. (MIRA 17:1)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei
AMN SSSR.

KARASEVA, Ye.V.; SEMENOVA, L.P.; SOLOSHENKO, I.Z.; CHERNUKHA, Yu.G.;
BOBROVSKIY, V.N.

Natural foci of leptospirosis in the North Ossetian A.S.S.R.
Zhur. mikrobiol. epid. i immun. 40 no.5:56-60 My '63.

(MIRA 17:6)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei
AMN SSSR.

KARASEVA, Ye.V.

Role of wild mammals in natural nidi of leptospirosis in the
U.S.S.R. Zool. zhur. 42 no.11:1699-1713 '63. (MIRA 17:2)

1. Institute of Epidemiology and Microbiology, Academy of
Medical Sciences of U.S.S.R., Moscow.

MESSINEVA, N.A.; KARASEVA, Ye.V.; GARIN, N.D.; SHEL'GAS, L. Ye.

Study of the blood coagulation system after infusion of the protein blood substitute EK-8 during experimental surgery.
Probl. gemat. i perel. krovi 8 no.6: 45-48 Je'63 (MIRA 17:4)

1. Iz Tsentral'nogo ordena Lenina instituta gematologii i perelivaniya krovi (dir. - dotsent A. Ye. Kiselev) Ministerstva zdravookhraneniya SSSR.

KARASEVA, Ye.V.

Materials on the geographical distribution and biology of some
species of lesser mammals in northern and central Kazakhstan.
Trudy MOIP. Otd. biol. 10:194-219 '63. (MIRA 17:4)

KARASEVA, Ye.V.; SOLOSHENKO, I.Z.; MELEKSETOV, M.A.

Interrelationship of the epizootic process in cattle and wild rodents in a leptospirosis focus. Zhur.mikrobiol., epid. i immun. 41 no.5:63-66 My '64. (MIRA 18:2)

1. Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR i veterinarnaya laboratoriya Mozdokskogo rayona Severo-Osetinskoy ASSR.

CHERNUKHA, Yu.G.; KARASEVA, Ye.V.

Leptospiral infections of the Lora type (australis serological group)
in the Georgian S.S.R. Zhur.mikrobiol., epid. i immun. 41 no.5:77-81
My '64. (MIRA 18:2)

1. Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

KARASEVA, Ye.V.; ANAN'IN, V.V.; AGUZAROVA, M.Kh.

Experience in reducing the activity of a natural focus of leptospirosis. Zhur.mikrobiol., epid. i immun. 42 no.4:65-69 Ap '65.

(M' RA 18:5)

1. Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR
i Respublikanskaya sanitarno-epidemiologicheskaya stantsiya
Severo-Osetinskoy ASSR.

SVESHNIKOVA, N.P. (Moskva); KARASEVA, Ye.V. (Moskva)

Leptospirosis in wild mammals of North America. Zool. zhur.
44 no.2:253-265 '65. (MIRA 12:5)

L 00911-66 EWT(1)/EWA(j)/EWA(b)-2 JK

ACCESSION NR: AP5017020

UR/0016/65/000/007/0089/0093

616.986.7-022.39 : 599.323.44

591.67-932.34 : 576.856.72

AUTHOR: Karaseva, Ye. V.; Kokovin, I. L.

TITLE: Winter observations on the circulation of *Leptospira pomona* among field mice in Northern Ossetia

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 7, 1965, 89-93

TOPIC TAGS: epidemiology, leptospirosis

ABSTRACT: The authors made a detailed study in the late fall and winter of 1963 of a natural focus of leptospirosis in Mozdokskiy Rayon, Northern Ossetia. The number of field mice (*Apodemus agrarius*) infected with *L. pomona* in the region at this time of the year was about the same as in the spring and summer. Some of the animals with leptospirosis during the cold season contract the disease in the summer and thus act as carriers of the causative agent for as many as 9 months. Thus, the pattern in Northern Ossetia is quite different from that obtaining in the foci of *L. grippotyphosa* in the central part of the Soviet Union, where the mouse population

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has only a few members that become infected in the summer. The difference may be due not so much to the specific course of the epizootic processes caused by circulation of leptospiras of different serological groups (*grippotyphosa* and *pomona*) as to the climatic conditions. In Northern Ossetia the year of the authors' investigations was mild with short freezing spells. Since the water in forests and swampy areas did not freeze, the infection could be transmitted through water at this time. Orig. art. has 2 tables.

ASSOCIATION: Institut epidemiologii i mikrobiologii im. Gamalei AMN SSSR (Institute of Epidemiology and Microbiology, AMN SSSR) 5/

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KARASEVA, Ye.V.; SHILYAYEVA, L.M.

Construction of burrows by a common hamster as related to
its age and the time of the year. Biul. MOIP. Otd. biol. 70
no. 6:30-39 N-D '65 (MIRA 19:1)

VERENINOVA, N.K.; SMIRNOVA, Ye.I.; KALACHEVA, N.F.; KUZNETSOVA, N.I.; KARASEVA,
Z.N.

Effectiveness of a compound living vaccine against plague, tularemia,
brucellosis, and anthrax. Report No.1: Compatibility of living vaccines
(plague, tularemia, brucellosis and anthrax) under experimental condi-
tions in guinea pigs. Zhur. mikrobiol. epid. i immun. 29 no.11:45-52
N '58. (MIRA 12:1)

1. Iz Instituta mikrobiologii i epidemiologii Yugo-Vostoka SSSR (Mikrob).
(PLAGUE, immunol.
live plague-tularemia-brucellosis-anthrax polyvaccine, eff.
in guinea pigs (Rus))
(TULAREMIA, immunol.
same)

MASHKILLEYSON, L.N., prof.; RABEN, A.S., doktor med.nauk; KARASEVA, Z.S.
(Moskva)

Chronic and progressive granulomatosis of Miescher-Leder and
its relation to sarcoidosis. Vest. dermat. i ven. 38 no.4:35-39
Ap '64. (MIRA 18:4)

ORINICHEV, S.I., inzh.; KARASEVICH, A.N., inzh.

Mechanization of welding operations in road machinery manufacture.
Svar. proizvod. no.2:28-29 F '65. (MIRA 18:3)

1. Ukrainskiy nauchno-issledovatel'skiy institut metallov.

KARASEVICH, E. K.

Dissertation defended at the Institute of Microbiology
for the academic degree of Candidate of Biological Sciences:

"Physiological Characteristics of Inactive Azotobacter Races."

Vestnik Akad Nauk, No. 4, 1963, pp. 119-145

KARASEVICH, V. I.

AUTHOR: Voronov, I.A., Chernyak, S.N., Prikhodko, V.E. and
Karasevich, V.I. 136-5-13/14

TITLE: Production of aluminium strip with micron tolerances.
(Proizvodstvo alyuminievoy lentyy s mikronnymi dopuskami.)

PERIODICAL: "Tsvetnye Metally" (Non-ferrous Metals) 1957, No.5,
pp. 79 - 85 (U.S.S.R.)

ABSTRACT: This work, which was carried out in 1956 in participation in a competition organised by the Ministry and the Scientific and Technical Society of Non-ferrous Metallurgy of the U.S.S.R. had as additional authors V.P. Bekhelev, V.G. Pikrovskiy, N.A. Morozov and D.P. Kurbatov. The aims of the work were to study the rolling of aluminium strip to tolerances of ± 0.005 mm by rolling in various types of mills and the production of strip by drawing in special installations. Tables show the production technology used for producing strip 0.5 mm thick to the ordinary tolerances, results of thickness measurements on strip for various methods of rolling, the frequency with which measurements showed values within various tolerances for strip produced by the drawing method, results of thickness measurements along the whole length of coils, results of mechanical tests and the production technology for producing 0.5 mm strip with micron tolerances. The various types of

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KARASEVICH, V.I.

AUTHOR: Krasevich, V.I.

136-11-11/17

TITLE: Determination of the Pressure on the Rolls in Rolling Foil
(Opredeleniye davleniya na valki pri prokatke fol'gi)

PERIODICAL: Tsvetnyye Metally, 1957,⁴⁰No.11, pp. 60 - 67 (USSR).

ABSTRACT: The author describes experimental work carried out with the participation of the department of plastic deformation of Metals of the L.P.I. imeni Kalinin and the Central Laboratory of Metallurgical Energetics (Tsentral'naya laboratoriya metallurgicheskoy energetiki). In this, the pressure on the rolls and the values of the tension were determined under works conditions with rolling foil, 480 mm wide, in four series of experiments. The results contained are compared with those calculated from various formulae (Table 1): the formula of Tselikov (Ref.3), the approximate formula of Tselikov (Ref.4) and the Korolev-Nikolayevskiy formula (Ref.5). Good agreement was obtained and the formulae, with allowance for tension, work-hardening and the elastic flattening of rolls, are recommended. The experiments showed that constancy of roll pressure when rolling foil from 0.027 to 0.013 mm and also when no foil was present between the rolls. For preventing breakages due to overloading of the rolls and other foil-rolling mill equipment, the provision of roll-pressure measuring devices is recommended. Tension was

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Determination of the Pressure on the Rolls in Rolling Foil 136-11-11/17

found to affect roll pressure. Further studies are to be made of the influence of the following factors on roll pressure when rolling aluminium foil: lubrication, roll surface quality, roll profile, rolling speed, thickness of foil.

There are 5 figures, 4 tables and 6 Russian references.

ASSOCIATION: Leningrad Plant for Treatment of Non-ferrous Metals (Leningradskiy zavod po obrabotke tsvetnykh metallov)

AVAILABLE: Library of Congress

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1. Metals-Deformation 2. Rolling mills-USSR

Karasevich, Viktor Ivanovich

PHASE I BOOK EXPLOITATION

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Chernyak, Semen Natanovich, Candidate of Technical Sciences, and
Karasevich, Viktor Ivanovich, Engineer

Proizvodstvo fol'gi (Manufacturing of Foils) Moscow, Metallurgizdat,
1957. 271 p. 3,500 copies printed.

Reviewers: Postnikov, N. N., Engineer, and Sandler, G. G.; Eds.:
Miller, L. Ye., and Nikonorova, N. A.; Ed. of Publishing
House: El'kind, L. M.; Tech. Ed.: Karasev, A. I.

PURPOSE: The book is intended as a practical manual for engineering
and technical personnel of nonferrous metallurgical plants.
It can also serve as a means for increasing qualifications
of foremen and brigade leaders in foundries and sheet-
rolling shops.

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Manufacturing of Foils

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COVERAGE: The book presents basic data on manufacture of various types of foils made out of aluminum and other nonferrous metals and alloys. It describes all foil production processes from casting to surface finishing. There are 33 references, of which 26 are Soviet, and seven German, British, and French.

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2. Refining of metal and casting of ingots	14
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SOV/136-59-10-12/18

AUTHORS: Karasevich, V.I. and Prikhod'ko, V.Ye.

TITLE: New Developments in the Production of Aluminized Iron

PERIODICAL: Tsvetnyye metally, 1959, Nr 10, pp 68-75 (USSR)

ABSTRACT: A method of producing Al-Fe-Al bimetal sheet, suitable for the manufacture of kitchen utensils, was developed by the staff of VAMI about 25 years ago (Ref 1 to 4). Following the development of other, easier to produce, bimetal materials and owing to the continued increase in the output of aluminium sheet, the Al-Fe-Al bimetal found little application. Interest in this material has been revived recently in connection with the possibility of using it as a substitute for nickel in the manufacture of some components of electron tubes used in the wireless industry. At temperatures above 600°C, the surface of the anode made of aluminized iron, darkens as a result of the formation of the intermetallic compound $FeAl_3$; this makes it possible to eliminate the cumbersome operation of blackening (carbonizing) the bright nickel surface, which at present has to be carried out at all the plants manufacturing electron tubes. By replacing nickel with

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New Developments in the Production of Aluminized Iron

aluminized steel, a large quantity of nickel strip would become available for other applications, the performance of the electron tubes would be improved and their manufacture simplified. It was for this reason that work on the production of aluminized steel by the method developed by the Giprtsvetmetobrabotka Institute, was resumed about ten years ago. Armco- A iron ($< 0.025\%$ C) sheet, 6 mm thick, was used as the starting material, with aluminium A0 (GOST 3549-57), 0.5 mm thick, used for cladding. The process employed was quite complex, required a large proportion of manual labour and comprised the following operations: cutting the iron sheet into strips 120 mm wide; normalizing the strips at 850 to 900°C; pickling in a solution containing 10% H_2SO_4 and 3% HNO_3 ; cleaning the strip with steel wire brushing; rolling the strip to 5 mm; degreasing it with aviation benzene; cleaning the iron strips (5 x 120 mm) and aluminium strips (0.5 x 130 mm) with steel wire brushes; cladding both sides of the iron strip with aluminium; heating the clad material at 450 to 500°C for 1.5 hr; hot-rolling the bimetal strip 6 mm thick to 1.5 mm,

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New Developments in the Production of Aluminized Iron

according to the following rolling schedule:
6→4.8→3.8→3.0→2.5→2.1→1.7→1.5 mm (kerosene being used as the lubricant); cutting the strip in 300 mm lengths; annealing at 450°C for 2 hr; cold-rolling from 1.5 to 0.8 mm, using two passes with 15% reduction and two passes with 10% reduction; annealing for 2 hr at 450°C; cold-rolling from 0.8 to 0.4 mm in two passes (15 and 10% reduction); annealing for 2 hr at 450°C; rolling from 0.4 to 0.2 mm; annealing at 450°C for 2 hr; rolling from 0.2 to 0.1 mm; slitting the sheets to the required width. The finished product, constituting a bimetal strip 90 to 100 mm wide and 0.1 mm thick, was comparatively hard and the attempts to soften it by subsequent heat treatment were not successful. Various annealing temperatures and times were tried in order to produce soft material free from dark stains (indicating the formation of the intermetallic compound FeAl_3) but to no avail. In order to simplify the manufacturing technique and to minimize the harmful effects of diffusion of iron into aluminium during annealing, the process outlined above was modified in the following manner: the steel sheet was

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New Developments in the Production of Aluminized Iron

first rolled to 1.8 mm thickness, normalized, pickled, brush-cleaned and then clad on both sides with aluminium strip 0.2 mm thick. The subsequent hot-rolling operation was carried out at 180 to 200°C since, at this temperature, no diffusion could take place. However, the product obtained by this modified method (whose complete schedule is reproduced in Fig 1) was still unsatisfactory, so to slow down the rate of diffusion of iron and to prevent the formation of the intermetallic alloy $FeAl_3$, an aluminium-base alloy containing 1.0 to 1.3% Si and 0.5% Fe (Ref 5), was used for cladding instead of pure aluminium. With this cladding material, dark stains appeared on the finished product only if the intermediate annealing operations were carried out above 540°C; bimetal that had not been heated above this temperature was stain-free and characterized by comparatively high ductility, the depth of the cup formed on the Erichsen test piece being 4 to 5 mm, ie within the specification limits set by the users. These findings were substantiated by the results of an investigation carried out by A.P.Smiryagin and O.S.Kvurt (Ref 9)

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reproduced in Fig 2, where the thickness (mm) of the intermetallic alloy layer formed at the Fe-Al interface during annealing at 550°C for 1, 3, 6, 12 and 24 hr is plotted against the silicon content (wt-%) in the aluminium alloy. It will be seen that even after 24 hr anneal at 550°C, no intermetallic alloy layer was formed when the silicon content in aluminium was within the 0.5 to 1.0% range; the intermetallic layer was formed when the silicon content was less than 0.5 or more than 1.0%. When the annealing temperature was raised to 600°C, the formation of the intermetallic layer took place irrespective of the silicon content; at this temperature the diffusion rate rapidly increased, owing to the presence of the $\alpha + \beta$ eutectic (melting point - 577°C). Originally, the improved bimetal strip was produced in lengths not exceeding 2 m, which were not convenient for use on automatic presses or punching machines. This necessitated further development work, as a result of which the following technique was found to be most suitable for production of the bimetal strip of the required lengths:

Card 5/10 cladding the iron sheet (6 x 1300 x 1300 mm) with silicon-

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New Developments in the Production of Aluminized Iron

bearing aluminium 0.7 mm thick; hot-rolling (200°C) the clad strip according to the following schedule: 7.4→5.3→4.4→3.0 mm; cold-rolling: 3→2.6→2.3→1.8→1.5→1.1→0.85→0.72→0.7→0.35→0.2→0.17→0.15→0.12→0.10 mm, with intermediate annealings (2 hr at 400 to 450°C) at the 0.7, 0.2 and 0.15 mm stages. Although strip in coils 20 to 70 m long could be produced in this manner, the process was still uneconomic, mainly owing to the low output of the rolling mills. Application of heavier rolls made it possible to reduce the number of passes and to increase the productivity to 12 machine-hours per 1 t of the finished product. Marked improvement was achieved only after the problem of cold welding of aluminium to steel had been solved and when steel and aluminium strip was used as the starting material instead of single sheets. Before the introduction of cold welding, sticking of aluminium to the rolls occurred frequently when insufficient quantity of lubricant was used or when it was attempted to use heavier drafts; when cold welding (carried out by deformation of 45% or more) was embodied in the process, this effect was eliminated. In its final

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form, the process comprised the following operations:
(1) slitting the steel (armco-OM containing less than 0.05% C or steel 08KPOM with 0.05 to 0.12% C) strip (2 mm thick, 220 mm wide, 500 kg coil) into two parts (110 + 110 mm, 110 + 90 mm, 100 + 100 mm); (2) cleaning the strip surface with steel wire brushes; (3) cladding with 0.2 mm thick, Si-bearing aluminium strip (20 mm wider than the steel strip) and rolling (in one pass) from 2.4 to 1.1 mm; (4) cold-rolling according to the schedule reproduced in Table 1 under the following headings: thickness (mm), initial and final; reduction (absolute, mm); reduction (relative %) per pass and total; (spindle oil mark "2" or "3" was used as the lubricant); (5) slitting the strip into the required width; (6) annealing the strip in a continuous annealing furnace (dimensions of the muffle: 3300 mm long, 440 mm wide, 180 mm high); the annealing conditions are given in Table 2 under the following headings: thickness (mm) of the strip; rate of passing through the furnace (m/min); muffle temperature, °C. Although the material obtained by this method was quite satisfactory (the depth of impression formed in the

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Erichsen test being 5 to 7 mm) and although no dark stains were formed, the formation of a thin FeAl_3 layer at the iron-aluminium interface during annealing was unavoidable. Metallographic examination revealed good quality of the bond between iron and aluminium alloy but the clad aluminium layer sometimes showed a tendency to break away from the iron base during the deep drawing operations. This effect was obviously caused by the presence of a brittle FeAl_3 layer; the relationship between the thickness of this layer (mm) and the annealing time (min) at 600°C , for iron clad with 0.5 and 1.0% Si-Al alloys, is illustrated in Fig 3; (Abstractor's note:- the units of time used in Fig 3 and Table 3 for the batch annealing are obviously wrong: the former should be sec and the latter hr) photographs, reproduced in Fig 4, show the microstructure of the aluminium clad iron strip (a) 0.10 mm and (b) 0.15 mm thick, annealed by passing through the furnace at 600 and 650°C respectively. To avoid the formation of the brittle FeAl_3 layer, continuous annealing was replaced by annealing at lower temperatures and for longer times in a batch furnace with forced air

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circulation. The comparative results obtained by the two annealing methods are given in Table 3 (continuous annealing - top, batch annealing - bottom) under the following headings: nominal thickness of the strip, mm; thickness of the clad layer before annealing (mm and %); annealing temperature ($^{\circ}\text{C}$) and time (sec); (see Abstractor's note above) the thickness (mm) of (a) chemical compound, (b) silicon-aluminium compound and (c) average total thickness (mm and %). It will be seen that no FeAl_3 layer was formed in the batch-annealed material. The improvement of ductility attained by changing over to batch annealing is illustrated by data given in Table 4 under the following headings: thickness of the bimetal strip, mm; depth (mm) of the depression on the Erichsen test piece (a) specified in TU 1053-54 (not less than), (b) actual, after continuous annealing and (c) actual, after batch annealing. (A satisfactory way of batch annealing the 0.10 mm thick bimetal strip has not yet been found.) Several conclusions were reached: (1) 20-Fold increase of the treated material has been attained by the introduction of

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the process described in the previous paper. (2) The brittle FeAl_3 layer is formed irrespective of the carbon content in steel its formation has been observed at both low (0.03%) and high (0.15%) carbon contents.

(3) The formation of the FeAl_3 layer has been accelerated by the application of an S. Scherer electrolytic process to the cladding and by batch annealing. The results are shown. There are 4 figures, 4 tables and 1 appendix.

ASSOCIATION: Leningradskiy zavod po obrabotke i khraneniyu metallov
(Leningrad Plant for Treatment and Storage of Metals)

Card 10/10

KRASIKOVA, V. I.; LIKHONOSOVA, N. D.; MARUSHKINA, V. I.; KARASEVICH, Ye. K.; LUDANOVA, N.V.
MIKHAYLOVA, M. M.; OVCHINNIKOVA, L. P.

"Study on the intensity of brine microflora respiration during ham curing."

report submitted for European Mtg, Meat Res Workers, Rockilde, Denmark, 7-15 Aug
1964.

KARASEVICH, Yu. N.

Abstract: "Study of the investigation of the rate of growth of short. ...
... cells,
... ..

See: 31, 1, 1974

1. KARASEVICH, YU., KRIVISKIY, A., KOSMACHEV, A.
2. USSR (600)
4. Biochemistry
7. Abstracts. Mikrobiologiya 22, no. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

KARASEVICH, Yu.N.

Effect of nitrogen nutrition on the character of growth of wrinkled and
smooth forms of *Saccharomyces cerevisiae*. Doklady Akad. Nauk S.S.S.R. 89,
110.4 741-3 '53. (MLRA 6:3)
(CA 47 no.19:10058 '53)

U.S.S.R.

Growth of the wrinkled and the smooth forms of *Saccharomyces cerevisiae* in aerobic and anaerobic conditions. Yu. N. Karasevich. *Trudy Inst. Mikrobiol., Akad. Nauk S.S.S.R.* 3:68-72 (1954). -- Under conditions of normal aeration the wrinkled form consumes sugar more rapidly and effectively than does the smooth form. The presence of O in the medium is essential for rapid growth of the wrinkled form, in comparison with the smooth.

G. M. K.

Karasevich, Yu. N.

Growth characteristics of wrinkled yeast strains on agar-containing medium. Yu. N. Karasevich (Inst. Microbiol., Acad. Sci. U.S.S.R., Moscow). *Mikrobiologiya* 24, 165-9 (1955).—Morphological and some physiol. differences between smooth and wrinkled strains of *Saccharomyces* 62

Cerevisiae are eliminated by culturing on medium containing agar. The differences are sharply brought out by culturing on synthetic nutrient with glutamic or aspartic acids, NH_4 , succinate, malate, phosphate, or urea. When the differences between strains disappear in artificial medium containing $(\text{NH}_4)_2\text{SO}_4$ the disappearance is directly attributable to acidification by the SO_4 ion. Julian F. Smith

KARASEVICH, Yu.N.

Session of the Scientific Council of the Academy of Sciences of the
Latvian S.S.R. on the utilization of raw materials containing
pentosans. Izv. AN SSSR. Ser. biol. no. 6: 112-113 N-D '56. (MIRA 10:1)
(PENTOSANS) (YEAST)

Card 1/1

66

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000720620008-6"

KARASEVICH, Yu. N.

USSR / Microbiology. General Microbiology

F-1

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 597

Author : Karasevich, Yu.N.

Inst : ~~Not Given~~ *Instit. Microbiol. AS USSR*

Title : Vitamin Nutrition of Some Industrial Types of Feed Yeasts.

Orig Pub : Mikrobiologiya, 1957, 26, No 1, 106-108

Abstract : Industrial types of nutrient yeast of the Candida family, investigated by the author, are deficient only in biotin (the optimal concentration in the medium is 0.00125 γ /ml); feed yeast of the Torulopsis family are not deficient in any vitamins.

KARASEVICH, Yu.N.

Adaptation of yeasts to pentoses. Part 1: Conditions necessary for the adaptation of *Candida tropicalis* to arabinose [with summary in English]. Mikrobiologiya 27 no.2:145-149 Mr-Apr '58 (MIRA 11:5)

1. Institut mikrobiologii AN SSSR, Moskva.

(MONILIA, culture

adaptation of *Candida tropicalis* to arabinose (Rus))

(ARABINOSE

adaptation of *Candida tropicalis* to arabinose containing media (Rus))

KARASEVICH, Yu.N.

Adaptation of yeasts to pentoses. Part 2: Oxidation of pentoses
original and adapted Candida cultures [with summary in English].
Mikrobiologiya 28 no.1:34-37 Ja-F '59. (MIRA 12:3)

1. Institut mikrobiologii AN SSSR, Moskva.

(MONILIA, metab.

pentose oxidation by adapted & non-adapted
cultures (Rus))

(PENTOSE, metab.

Monilia, oxidation by adapted & non-adapted cultures
(Rus))

KARASEVICH, Yu.N.

Adaptation of yeasts to pentoses. Report No.4: Adaptation of *Torulopsis utilis* to arabinose. *Mikrobiologiya* 28 no.3:364-367 My-Js '59. (MIRA 13:3)

1. Institut mikrobiologii AN SSSR.
(CRYPTOCOCCUS, culture
Torulopsis utilis, adaptation to arabinose (Rus))

KARASEVICH, Yu.N.

Conference on experimental production of useful variants of micro-organisms. Izv. AN SSSR. Ser. biol. no.3:470-472 My-Je '60.
(MIRA 13:7)

(MICROBIOLOGY--CONGRESSES)

KARASEVICH, Yu.N.

Conference on experimental production of useful variants of micro-organisms. Mikrobiologiya 29 no.3:465-467 My-Je '60. (MIRA 13:7)
(MICROBIOLOGY—CONGRESSES)

KARASEVICH, Yu.N.

Adaptation of yeasts to pentoses. The adaptation of *Candida pulcherrima* to d-xylose. *Mikrobiologiya* 30 no.5:905-911 S-0 '61.
(MIRA 14:12)

1. Institut mikrobiologii AN SSSR.
(XYLOSE) (CANDIDA PULCHERRIMA)

KARASEVICH, Yu.N.

Adaptation of yeast to pentoses. Report No.6: Characteristics of the development of *Candida tropicalis* SD 5 on media with *d*-ribose. (MIRA 14:12)
Mikrobiologiya 30 no.6:1003-1010 N-D '61.

1. Institut mikrobiologii AN SSSR.
(CANDIDA TROPICALIS) (RIBOSE)

KARASEVICH, Yu.N.

Some shortcomings in the work of the journal of abstracts
"Biologicheskaya khimiya." Mikrobiologiya 30 no.6:1140 N-D '61.
(MIRA 14:12)

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KARASEVICH, Yu.N.

Dynamics of the deadaptation of L-arabinose-adapted *Candida tropicalis* yeasts SD-5 (T-3). *Mikrobiologiya* 31 no.3:434-442
My-Je '62. (MIRA 15:12)

1. Institut mikrobiologii AN SSSR.
(YEAST) (ARABINOSE)

KARASEVICH, Yu.N.

Study of the deadaptation of the 1-arabinose-adapted yeast
Candida tropicalis X-9. Mikrobiologiya 32 no.1:50-57 '63
(MIRA 17:3)

1. Institut mikrobiologii AN SSSR.

YEROKHINA, L.I.; IL'INA, T.S.; KAMENEVA, S.I.; KRYLOV, V.N.;
 LOROV-KAYA, N.D.; MIRELIN, S.Z.; MIKIFOROV, V.N.; SOKOLOVA,
 Ye.V.; SUKHODOLETS, I.V.; ZAKHAROV, I.A.; INGE-VECHTOMOV,
 S.G.; KVITKO, K.V.; KRIVISKIY, A.S.; KARALEVICH, Yu.I.;
 ENGEL'GARDT, V.A., akademik, glav. red.; ALIKHENYAN, G.I.,
 prof., red.; IL'INA, T.S., red.

[Genetics and variation of micro-organisms] Genetika i se-
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 (MIRA 17:9)

1. Institut atomnoy energii imeni I.V.Kurchatova (for
 Yerokhina, L'Irina, Kameneva, Krylov, Lenevskaya, Mirelin,
 Mikiforov, Sokolova, Sukhodolets). 2. Kafedra genetiki Le-
 ningradskogo gosudarstvennogo universiteta (for Zakharov,
 Inge-Vechtomov, Kvitko). 3. Institut radiatsionnoy i biokhi-
 micheskoy biologii (for Krivitskiy). 4. Institut mikro-
 biologii AN SSSR (for Karasevich).

KARASEVICH, Yu.N., kand. biolog. nauk

Development of Soviet microbiology, scientific session at the
Department of Biochemistry, Biophysics and the Chemistry of
Physiologically Active Compounds. Vest. AN SSSR 34 no.7:111-113
Jl '64 (MIRA 17:8)

KARASEVICH, Yu.N.; VOLKOVA, L.D.; KETIG, E.G.

Inhibition of the synthesis of pantothenic acid by some amino acids and yeasts of *Torulopsis dattila*. Dokl. AN SSSR 158 no.1:212-213 S-O '64 (MIRA 17:8)

1. Institut mikrobiologii AN SSSR. Predstavleno akademikom A.A. Imshenetskim.

KARASEVICH, Yu.N.

Initial stages of the pentose metabolism in micro-organisms. Izv.
AN SSSR. Ser. biol. no.2:231-242 Mr-Ap '65. (MIRA 18:4)

1. Institute of Microbiology, Academy of Sciences of the U.S.S.R.,
Moscow.

KARASEVICH, Yu.N.

Adaptation of the yeast *Torulopsis candida* to pentoses. (zv.
AN SSSR.Ser.biol. no.3s398-399 My-Je '65. (N°18 1885)

1. Institut mikrobiologii AN SSSR.

KARASEVICH, Yu.N.; VOLKOVA, L.F.; BUTENKO, S.A.

Growth inhibition in certain micro-organisms by threonine. Dokl. AN
SSSR 163 no.5:1259-1261 Ag '66 (MIRA 18:8)

1. Institut mikrobiologii AN SSSR. Submitted November 4, 1964.

KARASEVICH, Yu.N.: BATURINA, M.V.

Deadaptation of *Candida tropicalis* yeast adapted to L-arabinose.
Mikrobiologiya 34 no.4:676-679 J1-Ag '65.

(MIRA 18:10)

1. Institut mikrobiologii AN SSSR.

KARASEVICH, Yu.N.; VOLKOVA, L.P.; KENIG, E.G.

Indicator culture for quantitative determination of inosite
in natural media. Prikl. biokhim. i mikrobiol. 1 no.5:554-
558 S-O '65. (MIRA 18:11)

1. Institut mikrobiologii AN SSSR.

2
KARASEWA, A. A.

TERDEVA, L. O., VOZNESENSKAYA, V., KARASEWA, A. A.,

Chemisch-technologische Untersuchungen bei der industriellen
Herstellung von Schmierölen aus paraffin- und schwefelhaltigen
Erdölen.

Report to be submitted for the Symposium Lubricants and
Lubrication, Dresden, 27-30 June 1961

KARAS-GASPAREC, V.; PINTER, T.

Applying the total decomposition of potassium hexacyanoferrates (II) in the quantitative analysis. Note 4. Croat chem acta 34 no.3:131-135 '62.

1. Zavod za kemiju, Medicinsk, fakultet, Zagreb.

KARASH, E.B., inzhener.

Using underwater pipelines for cementing maritime wells.

Neftianik 2 no.5:5-6 My '57.

(MLRA 10:5)

1. Proizvodstvenno-tekhnicheskogo otdela kontory bureniya
No. 1 Neftepromyslovogo upravleniya Gyurgyanneft'.
(Oil well cementing)

KARASH, T. N.

Tashkent

Medical Institute, Middle Asian Institute for the Improvement of Physicians and
Optical Assistants

Traumatism of the Organ of Sight in the Great Patriotic War

Soviet Source: N: Pravda Vostoka, 14 Mar. 1947, Tashkent
Abstracted in USAF "Treasure Island" Report No. 15230, on file in Library of
Congress, Air Information Division.

KARASH, Tat'yana Nikolayevna, kand. med. nauk(Leningrad);
VASIL'YEVA, K.P., red.; NAZAROVA, A.S., tekhn. red.

[House of Friends in Phnom Penh. A story as told to
Liudmila Pinchuk] Dom družei v Pnom-Pene. Rasskaz za-
pisan Liudmiloi Pinchuk. Moskva, Izd-vo "Znanie," 1963.
94 p. (MIRA 17:2)

KARASH, Yu. M.

Microsporum gypseum. Vest. dermat. i ven. 36 no.6:23-27 Je '62.
(MIRA 15:6)

1. Iz mikologicheskoy laboratorii (zav. - zasluzhennyy deyatel' nauki prof. P. N. Kashkin) Leningradskogo instituta dlya usovershenstvovaniya vrachey.

(FUNGI, PATHOGENIC)

KARASH, Yu.M. (Leningrad, 9-15, Kaluzhskiy pereulok, 9, kv.15)

Histochemical study of nucleic acids in preserved ovarian tissues
from cadavers. Arkh. anat., gist. i embr. 47 no.8:92-95 Ag '64.
(MIRA 18:4)

1. Kafedra akusherstva i ginekologii Gosudarstvennogo instituta
usovershenstvovaniya vrachey imeni Kirova (zav. - zasluzhennyy
deyatel' nauki prof. A.E.Mandel'shtam), Leningrad i kafedra
patologicheskoy anatomii Gosudarstvennogo instituta usover-
shenstvovaniya vrachey (zav. - prof. O.K.Khmol'nitskiy),
Leningrad.

KARASHARLY, A.G.; SEID-RZA, M.K.

Drilling deep directional wells. Azerb.neft.khoz. 37 no.10:
12-14 0 '58. (MIRA 12:2)

(Oil well drilling)

KASUM-ZADE, D.S.; KARPENKO, M.M.; PROTASOV, G.N.; KARASHARLY, A.G.

Brief review of the studies of drilling methods carried out by
the Azerbaijan Scientific Research Institute for Petroleum Production.
Trudy AzNII DN no.9:105-109 '60. (MIRA 14:5)
(Azerbaijan—Oil well drilling)

KARASHARLY, A.G.; VASIL'YEV, A.G.; BABAYEV, N.Kh.; MAKHMUDOV, Dzh.M.;
TALYBOV, N.Sh.

Efficient method for designing deep directional wells with
considerable deflections. Trudy AzNII DN no.10:271-285 '60.
(MIRA 14:4)

(Oil well drilling)

ABDINOV, M.A.; YES'MAN, B.I.; KARASHARLY, A.G.; SADYKHOV, Yu.V.

Effect of the flow properties of transported fluid and the eccentricity
of a useful section on hydraulic losses in the annular space.
Azerb. neft. khoz 40 no.11:13-15 N '61. (MIRA 15:1)
(Oil well drilling fluids)

BAGIROV, A Yu.; KARASHARLY, A.G.; FARAEZHIEV, T.G.; FATALIYEV, H.D.;
SHAMKHALOV, D.A.

Determining the optimal amount of drilling fluid to ensure the
thorough cleaning of the well bottom. Izv. vys. ucheb. zav.;
neft' i gaz 8 no.1:23-27 '65.

(MIRA 18:2)

1. Azerbaydzhanskiy institut nefti i khimii imeni M. Azizbekova
i "AzNIlburneft".

SOV/124-57-5-5293

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 5, p 27 (USSR)

AUTHORS: Karasharly, K. A., Kerimov, I. G., Nasirov, Ya. N., Rozlovskiy, A. I.,
Shaulov, Yu. Kh.

TITLE: On the Conditions Conducive to the Inception of Instability of Normal
Combustion (K voprosu ob usloviyakh vozniknoveniya neustoychi-
vosti normal'nogo goreniya)

PERIODICAL: Dokl. AN AzSSR, 1955, Vol 11, Nr 12, pp 819-823

ABSTRACT: An experimental investigation of flame propagation in methane-oxygen
and acetylen-oxygen mixtures aimed at an evaluation of the lower
boundary of Reynolds numbers at which the transition zone from nor-
mal to detonational combustion begins. The experiments were made
in transparent rubber balloons up to 20 liters in volume. No detona-
tion was observed during the combustion of the methane-oxygen mix-
tures; the beginning of flame acceleration corresponds to Reynolds
numbers of the order of 4 to 10×10^4 . Bibliography: 5 references.
B. V. Raushenbakh

Card 1/1

YERIMOV, I.G.; KARASHARLY, K.A.; SHARIFOV, K.A.

Normal combustion rates of nitrogen dioxide mixtures with aromatic hydrocarbons in a bunsen burner flame. Trudy Inst. fiz. i mat.

AN Azerb. SSR. 9:155-160 '58.

(MIRA 12:2)

(Combustion)

(Nitrogen oxides)

(Hydrocarbons)

KARASHALI, K. A. Cand Chem Sci -- (disc) "Thermodynamic Investigations at Low Temperatures of 1, 1-dicyclohexyldodecane, 1-Phenyl-1-cyclo-hexyldodecane and 1, 1-diphenyldodecane," Baku, 1960, 11 pp, 200 copies (Moscow State U im M. V. Lomonosov, Chemistry Faculty) (KL, 49/60, 125)

KARASHARLI, K.A.; STRELKOV, P.G.

Thermodynamic properties of 1-phenyl-cyclohexyldodecane ($C_{24}H_{40}$)
in the the temperature range from 14 to 298.16°K. Dokl. AN 24 10
Azerb. SSR 16 no.4:341-344 '60. (MIRA 13:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh i radiotekhnicheskikh izmeneniy pri komitete standartov.
Predstavleno akad. AN AzerSSR M.F. Nagiyevym.
(Cyclododecane--Thermal properties)

85813

S/081/60/000/019/001/012

A006/A001

// 1210 also 2209

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 19, p. 48, # 76423

AUTHORS: Karashchy, K. A., Strolkov, P. G.

TITLE: Thermodynamical Investigations of Dicyclohexyldodecane ¹

PERIODICAL: Azerb. khim. zh. 1959, No. 4, pp. 87-92 (Azerb. summary)

TEXT: A method, described in RZhKhim, 1955, No. 1, p. 204, was used to measure the true heat capacity (C_p) of dicyclohexyldodecane (I) within a range of 13 - 298.16° K. The purity of the specimen, purified by zonal melting, as determined from the depression of the freezing point, was 98.28 molar %. Deviations of the experimental points from the smoothened C_p - T curve did not exceed 0.15%. Between 14 and 27° K, $C_p = 0.016 T^2$, $S_{298.16}^0 = 130.42 \pm 0.3$ entr. units and $H_{298.16}^0 - H_0^0 = 19,519 \pm 50$ cal/mole. The temperature of the ternary point of pure I is equal to $300.58^\circ K \pm 0.02^\circ$; the melting heat is $10,581 \pm 50$ cal/mole.

I. Paukov

Translator's note: This is the full translation of the original Russian abstract

Card 1/1

AUTHORS: Karasharli, K. A., Strelkov, P. G. S/076/60/034/03/035/038
B005/B016

TITLE: Thermodynamic Properties of Dicyclohexyldodecane¹

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol 34, Nr 3, pp 693-695 (USSR)

TEXT: The dicyclohexyldodecane ($C_{24}H_{46}$) used by the authors was synthesized at the Institut nefiti AN SSSR (Petroleum Institute of the AS USSR) by A. A. Petrov (Ref 1). The hydrocarbon was purified in a chromatographic way. By an additional fine purification by means of the zonal fusion process the degree of purity could be raised to 98.28%. It was calorimetrically determined from the melting point depression (Fig 1). This method, however, is reliable only if the impurities in the solid phase are insoluble, which is not quite clear in the present case. The authors determined the heat capacity of solid dicyclohexyldodecane as dependent on temperature. The heat capacity of the empty calorimeter was determined at 47 temperatures, that of the calorimeter with $C_{24}H_{46}$ at 69 temperatures between 12 and 320°K. Helium was used as filling gas for the calorimeter. In the total temperature range under consideration no deterioration of the heat exchange occurred, which indicates that helium was not adsorbed by the hydrocarbon. The results of the 69 measurements are summarized in a table. ✓

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Thermodynamic Properties of Dicyclohexyldodecane

S/076/60/034/03/035/038
B005/B016

Owing to its impurities the hydrocarbon began to melt already below the triple point. In order to obtain values for the heat capacity of solid $C_{24}H_{46}$ in the range closely below its melting point, a value C_1 is subtracted from the values experimentally obtained, which was calculated from the formula

$$C_1 = \frac{T^* - T^S}{(T^S - T_1)^2} \cdot \lambda \cdot C_1 - \text{effective increase in heat capacity due to the melting}$$

with the impurities; T^* - triple temperature; T^S - melting point of the sample; T_1 - temperature, for which C_1 is to be calculated; λ - melting heat. Figure 2 shows the results corrected in this way for the temperature range closely below the melting point in a $T - 1/X$ diagram. Since the heat capacity of the hydrocarbon investigated at 13 - 27°K does not obey Debye's law, the curve was graphically extrapolated for $T = 0^\circ K$. Between 13 and 27°K the temperature dependence of the heat capacity can be well expressed by the equation $C_p = 0.016T^2$. The authors determined the following thermodynamic data for the hydrocarbon investigated: standard entropy $S_{298.16} = 130.4 \pm 0.3$ E.U.; enthalpy $H_{298.16} - H_0 = -19519 \pm 50$ cal/mole; the melting point of the sample investigated was $300.26 \pm 0.02^\circ K$, for the triple point T^* a value of $300.58 \pm 0.02^\circ K$ was calculated.

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Thermodynamic Properties of Dicyclohexyldodecane

S/076/60/034/03/035/038
B005/B016

The melting heat λ was determined to be 10581 ± 50 cal/mole. Therefrom it follows for the melting entropy of dicyclohexyldodecane:

$$S_{m.p.} = \frac{10581}{300.58} = 35.2 \pm 0.15 \text{ cal/deg.mole. The authors thank V. N. Kostyukov,}$$

Candidate of Physical and Mathematical Sciences, for his valuable advice and the laboratory assistants L. Ya. Matasova and L. G. Khersonets for their assistance in measurements. There are 2 figures, 1 table, and 3 references, 2 of which are Soviet.

SUBMITTED: August 15, 1959

Card 3/3

PETROV, A.I.A.; TSEDLINA, A.D.; KARASHEN, K.A.

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